

524-591

3/22/2011

1 of 36



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

David Gustafson, Ph.D.  
Monsanto Company  
1300 I Street, NW – Suit 450 East  
Washington, DC 20005

MAR 22 2011

Dear Dr. Gustafson:

Subject: Labeling Amendment; Well Setback; Aerial & Chemigation  
MON 63410 Herbicide  
EPA Registration No. 524-591  
Submission Date: June 25, 2010  
Decision Number: 436899

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. You have twelve months from the date of this letter or until the next label printing, whichever comes first, to incorporate the changes found within the supplemental labels into the master label. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment. If you have any questions regarding this label, please contact me at (703) 306-0415 or [davis.kable@epa.gov](mailto:davis.kable@epa.gov).

Sincerely yours,

A handwritten signature in black ink, appearing to read "Kable Bo Davis".

Kable Bo Davis  
Product Manager 25  
Herbicide Branch  
Registration Division (7505P)

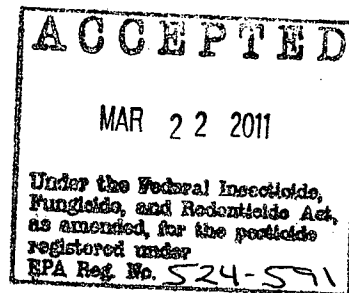
Enclosure- Stamped Label; Agency Reviews (D381367; D387490)

MASTER LABEL FOR EPA REG. NO. 524-591

Registered Brand Names:

**MON 63410™ Herbicide**  
**WARRANT™ Herbicide**

I.	Main Label for Crop Uses	Pages 2 – 28
II.	Supplemental Labeling	Pages 29 – 35



# WARRANT™ Herbicide

WARRANT is an encapsulated herbicide for weed control in Field Corn, Production Seed Corn, Forage or Grain Sorghum (Milo), Soybeans and Cotton.

Roundup Ready Plus™  
Weed Management Solutions

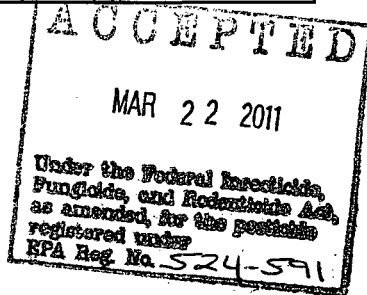
**ACTIVE INGREDIENT:**

*Acetochlor.....	33.0%
OTHER INGREDIENTS .....	67.0%
	100.0%

\*Contains 359 grams/liter or 3.0 pounds/gallon of 2-chloro- N-ethoxymethyl-N-(2-ethyl-6-methylphenyl) acetamide.  
Protected by U.S. Patent Nos. 5,225,570 and 5,925,595. Other patents pending. No license is granted under any non-U.S. patents.

GROUP	15	HERBICIDE
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EPA Reg. No. 524-591



[DATE]

**SHAKE WELL BEFORE USING**

**COMPLETE DIRECTIONS FOR USE**

Read the entire label before using this product.

Use only according to label instructions.  
Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

*[Container Label Option]*

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

*[Non-refillable Container Label Option]*

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. IT IS INTENDED THAT REPACKAGING BE ONLY IN ACCORDANCE WITH A MONSANTO REPACKAGING OR TOLL REPACKAGING AGREEMENT.

**CONTENTS**

- 1 1.0 IMPORTANT PHONE NUMBERS**
- 2 2.0 PRECAUTIONARY STATEMENTS**
  - 2.1 Hazards to Humans and Domestic Animals
  - 2.2 Environmental Hazards

**DIRECTIONS FOR USE**

- 3.0 Storage and Disposal
- 4 4.0 PRODUCT INFORMATION**
  - 4.1 Use Restrictions
- 5 5.0 WEED RESISTANCE MANAGEMENT**
- 6 6.0 SOIL TEXTURE**
- 7 7.0 MIXING, SPRAYING AND HANDLING INSTRUCTIONS**
  - 7.1 Equipment Cleaning & Repair
  - 7.2 Sprayer Compatibility
- 8 8.0 APPLICATION SYSTEMS**
  - 8.1 Ground Broadcast Treatment
- 9 9.0 APPLICATION TIMING AND METHODS**
  - 9.1 Postemergence Surface Application
  - 9.2 Preplant Incorporated, Preemergence surface in Sorghum only
  - 9.3 Cultivation Information
- 10 10.0 WEEDS CONTROLLED**
  - 10.1 Annual Grasses
  - 10.2 Annual Broadleaves
- 11 11.0 FIELD CORN AND PRODUCTION SEED CORN**
  - 11.1 WARRANT Herbicide
  - 11.2 WARRANT Herbicide plus Roundup Agricultural Herbicides on Corn Hybrids with Roundup Ready<sup>®</sup> 2 Technology
  - 11.3 WARRANT Herbicide Tank-Mixtures for Field Corn
- 12 12.0 FORAGE OR GRAIN SORGHUM (MILO)**
  - 12.1 WARRANT Herbicide
- 13 13.0 SOYBEANS**
  - 13.1 WARRANT Herbicide
  - 13.2 WARRANT Herbicide plus Roundup<sup>®</sup> Agricultural Herbicides on Roundup Ready Soybeans and Roundup Ready 2 Yield Soybeans
  - 13.3 WARRANT Herbicide Tank-Mixtures for Soybeans

**14 14.0 COTTON**

- 14.1 WARRANT Herbicide
- 14.2 WARRANT Herbicide plus Roundup Agricultural Herbicides on Roundup Ready Cotton
- 14.3 WARRANT Herbicide plus Roundup Agricultural Herbicides on Roundup Ready Flex Cotton
- 14.4 WARRANT Herbicide Tank-Mixtures for Postemergence Over-The-Top Use in Cotton
- 14.5 WARRANT Herbicide Tank-Mixtures for Post-Directed Use in Cotton

**15 15.0 LIMIT OF WARRANTY AND LIABILITY**

**1.0 IMPORTANT PHONE NUMBERS**

- 1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE,

1-800-332-3111

- 2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000

**32.0 PRECAUTIONARY STATEMENTS**

**2.1 Hazards to Humans and Domestic Animals**

Keep out of reach of children.

**CAUTION!**

HARMFUL IF ABSORBED THROUGH THE SKIN OR INHALED.  
 MAY CAUSE ALLERGIC SKIN REACTION. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.  
 Avoid breathing vapor or spray mist.  
 Remove contaminated clothing and wash before reuse.  
 Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.

<b>FIRST AID:</b> Call a poison control center or doctor for treatment advice	
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Sensitized persons should avoid further contact and reuse of contaminated clothing.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> </ul>

- Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information
- This product is identified as **WARRANT Herbicide, EPA Registration No. 524-591**

#### **Personal Protective Equipment (PPE):**

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

**Applicators and other handlers must wear:** long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride, and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls:** When handlers use closed systems, or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **User Safety Recommendations:**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **2.2 Environmental Hazards**

This product is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the ground water is shallow, may result in ground water contamination.

Acetochlor has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.
Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, are: coveralls, chemical-resistant gloves made of any waterproof material, and shoes plus socks.

**3.0 STORAGE AND DISPOSAL**

Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

**PESTICIDE DISPOSAL:** To avoid wastes, use all material in this container, including rinsate, by application in accordance with label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable federal, state and local regulations and procedures.

*[Alternate PESTICIDE DISPOSAL statement for transport vehicles only: To avoid wastes, empty as much product from this transport vehicle as possible for repackaging or use in accordance with label directions. If wastes cannot be avoided, offer remaining product or rinsate to a waste disposal facility or pesticide disposal program. All disposal must be in accordance with applicable federal, state, and local regulations and procedures.]*

**CONTAINER HANDLING AND DISPOSAL:** See container label for container handling and disposal instructions and refilling limitations.

[OPTIONAL CONTAINER AND DISPOSAL STATEMENTS AND REFILLING LIMITATIONS FOR CONTAINER LABELS]

FOR NONREFILLABLE RIGID PLASTIC 2.5-GALLON CONTAINERS AND OTHER CONTAINERS OF GREATER THAN 1-GALLON BUT EQUAL TO OR LESS THAN 5-GALLON CAPACITY: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state.

[Alternate container statement: Nonrefillable container. Do not reuse or refill this container.]

Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Once properly rinsed, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or Monsanto at 1-800-768-6387. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[Alternate container disposal statement: Then offer this container for recycling, if available. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.]

FOR NONREFILLABLE RIGID PLASTIC 30-GALLON CONTAINERS AND OTHER CONTAINERS OF GREATER THAN 5-GALLON CAPACITY: Nonrefillable container. Do not reuse or refill this container.

[Alternate container statement: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state.]

Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix-tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over



application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Once properly rinsed, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or Monsanto at 1-800-768-6387. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

[Alternate container disposal statement: Then offer this container for recycling, if available. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.]

**FOR ALL REFILLABLE CONTAINERS, EXCEPT TRANSPORT CONTAINERS :** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning this container before refilling is the responsibility of the refiller. Cleaning this container before final disposal is the responsibility of the person disposing of the container.

To clean this container before final disposal, empty the remaining contents from this container into application equipment or a tank mix. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer this container for recycling, if available. To obtain information about recycling refillable containers, contact Monsanto Company at 1-800-768-6837.

[Optional container label statement: Return properly rinsed container to Monsanto for recycling. Contact Monsanto at 1-800-768-6387.]

**FOR ALL TRANSPORT CONTAINERS AS DEFINED IN 40 CFR 156.3:** Emptied container retains vapor and product residue. Observe all precautions stated on this label until the container is cleaned, reconditioned, or destroyed. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, and worn-out threads and closures. Clean thoroughly before reuse for transportation of a material of different composition or before retiring this transport vehicle from service.

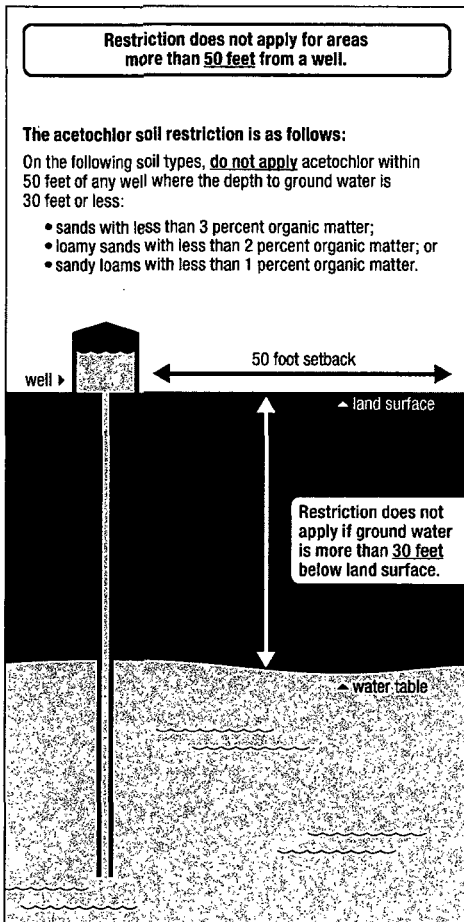
**4.0 PRODUCT INFORMATION**

WARRANT Herbicide is for control of the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. This product will not control emerged seedlings. This product is to be applied postemergence to the crop and preemergence to the weeds. Read and carefully observe precautionary statements and all other information appearing on the labeling of all products used in mixtures and sequential treatments.

**4.1 Use Restrictions**

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the ground water is shallow, may result in ground water contamination. On the following soil types, do not apply this product within 50 feet of any well where the depth to ground water is 30 feet or less: sands with

less than 3 percent organic matter; loamy sands with less than 2 percent organic matter; or sandy loams with less than 1 percent organic matter. See the figure for additional clarification.



This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain a minimum of 110 percent of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100 percent of the capacity of the largest pesticide

container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Do not flood irrigate to apply or incorporate this product.

Product must be used in a manner which will prevent back siphoning into wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.

Do not apply this product through any type of irrigation system, unless otherwise directed by approved supplemental labeling in possession of the user at the time of application.

Disposal of excess pesticide, spray mixtures or rinsate must be according to label use instructions or according to the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA regional office.

Do not apply under conditions which favor runoff or wind erosion of soil containing this product to non-target areas. To prevent off-site movement due to runoff or wind erosion:

Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered soils.

Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

Do not apply this product using aerial application equipment, unless otherwise directed by approved supplemental labeling in possession of the user at the time of application.

Do not apply when wind conditions favor drift to non-target sites. To minimize spray drift to non-target areas:

Use low-pressure application equipment capable of producing a large droplet spray. Do not use nozzles that produce a fine droplet spray. Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.

Keep ground driven spray boom as low as possible above the target surface.

Make application when the wind velocity favors on-target product deposition (approximately 3 to 10 miles per hour). Do not apply when wind velocity exceeds 15 miles per hour. Avoid application when gusts approach 15 miles per hour.

Low humidity and high temperatures increase the likelihood of spray drift to sensitive areas. Avoid spraying during conditions of low humidity and/or high temperatures. Do not apply during inversion conditions.

Use of this product not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

Flush sprayer with clean water after use.

Dry weather may reduce effectiveness of this product. Cultivate if weeds develop.

**ROTATIONAL CROPS:**

- 1) If a crop treated with this product is lost, corn (all types), cotton, soybeans, and milo (sorghum), may be replanted immediately, but could result in crop injury. When planting milo (sorghum), only use seed properly treated with seed protectant or safener. Do not exceed a total of 3.0 pounds per acre of acetochlor active ingredient if additional product is applied.
- 2) Nongrass animal feeds such as alfalfa, clover, kudzu, lespedeza, lupin, sainfoin, trefoil, velvet bean, and *Vetch* spp. may be planted 9 months after application. Wheat may be planted 4 months after application.
- 3) Rotate the next season to the following crops: soybeans, corn (all types), milo (sorghum), cotton, tobacco, sugar beets, sunflowers, potatoes, barley, buckwheat, millet (pearl and proso), oats, rye, teosinte, triticale, wild rice, dried shelled bean group *Lupinus* spp. (including grain lupin, sweet lupin and white lupin); *Phaseolus* spp. (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean *Vigna* spp. (includes adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea and urd bean); broad bean (dry) chickpea, guar, lablab bean, lentil, pea (*Pisum* spp., includes field pea); pigeon pea.

**5.0 WEED RESISTANCE MANAGEMENT**

<u>GROUP</u>	 15	<u>HERBICIDE</u>
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Acetochlor, the active ingredient in this product, is a Group 15 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population can contain plants naturally resistant to Group 15 herbicides. Weed species resistant to Group 15 herbicides may be effectively managed utilizing another herbicide from a different Group, or by using other cultural or mechanical practices.

**General principles of herbicide resistance management**

1. Apply integrated weed management practices. Use multiple herbicide modes-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
2. Use the full recommended herbicide rate and proper application timing for the hardest to control weed species present in the field.
3. Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
4. Monitor site and clean equipment between sites.

**For annual cropping situations also consider the following:**

- Start with a clean field and control weeds early by using a burndown treatment or tillage in combination with a preemergence residual herbicide as appropriate.
- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Use good agronomic principles that enhance crop competitiveness
- Use new commercial seed that is as free of weed seed as possible.

**Report any incidence of repeated non-performance of this product on a particular weed to your Monsanto representative, local retailer, or county extension agent.**

**6.0 SOIL TEXTURE**

Applicators should evaluate soil conditions carefully to assure that they choose the correct label rate.

The use rates of this product and the other herbicides labeled for use in tank mixtures with this product vary with soil texture. Unless soil texture is specifically named, rate tables throughout this label refer to only three soil textural groups: coarse, medium and fine. The following is a complete listing of soil textures included in each of these three soil textural groups:

SOIL TEXTURAL GROUP	SOIL TEXTURE
COARSE	sand, loamy sand, sandy loam
MEDIUM	loam, silt loam, silt, sandy clay loam
FINE	silty clay loam, clay loam, sandy clay, silty clay, clay

Refer to the above table to determine the corresponding soil textural group for the soil to be treated.

**7.0 MIXING, SPRAYING AND HANDLING INSTRUCTIONS**

**NOTE:** Direct contact or exposure to this product or spray mixtures of this product should be minimized. The following instructions for transfer, mixing, cleaning or repairing equipment should be followed in order to minimize this exposure. Review the protective clothing requirements as

listed in the "PRECAUTIONARY STATEMENTS" section of this label and do not use this product until you have the necessary protective clothing.

### **2.5 Gallon Containers**

Open pouring from these containers can result in exposure from splashing or spilling. Special care in lifting and pouring are strongly recommended.

### **Bulk Containers**

Open pouring from these containers can result in exposure from splashing or spilling and is not recommended. This product should be transferred from these containers to the mix or spray tank using pumps or transfer probes. The probe or pump should not be removed from the container or disconnected until the container is emptied and rinsed. Use the pump or probe system to rinse the empty container and transfer the rinsate directly to the mix or spray tank.

### **7.1 Equipment Cleaning & Repair**

Cleaning and repair of transfer systems and application equipment is a source of exposure to this product. Care should be taken to minimize exposure during cleaning and repair of transfer systems and application equipment. Whenever possible, these systems or equipment should be rinsed before being cleaned or repaired.

When repairs must be made during transfer or application, the equipment should be shut down, and special care taken to avoid contact with the pesticide.

### **7.2 Sprayer Compatibility**

Always predetermine the compatibility of this product or labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Mix this product or labeled tank mixture of this product with the appropriate carrier as follows:

1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the sprayer tank one-half full with the appropriate carrier.
3. If a compatibility agent is necessary to improve mixing or to prevent the formation of undesirable and unsprayable gels or precipitates, while agitating add it to the carrier already in the tank. Use only compatibility agents cleared by FDA for this use. Read and follow all directions for use, cautionary statements and all other information appearing on the selected compatibility agent label. Check for adequate agitation.
4. If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when flowable is pre-mixed one part flowable with one part water and added to the tank in diluted form.
6. Add this product slowly through the screen into the tank. Mixing and compatibility may be improved when this product is prediluted with two parts of water and added to the tank in diluted form.
7. Complete filling the sprayer tank with carrier. If a Roundup® agricultural herbicide or a Gramoxone brand herbicide is used, add the required amount near the end of the filling process. Remove hose from tank immediately after filling to avoid siphoning back into the carrier source.

Maintain good agitation at all times until the contents of the tank are sprayed.

**NOTE:** If spray mixture is allowed to settle at any time, thorough agitation is required to resuspend the mixture before spraying is resumed. Keep by-pass line on or near bottom of tank to minimize foaming. Screen size in nozzle or line strainers should be 50-mesh. Carefully select proper nozzle to avoid spraying a fine mist. Check for even distribution of spray droplets. To reduce loss of the chemical due to drift of a fine mist, apply at nozzle pressures below 40 psi.

## **8.0 Application Systems**

### **8.1 Ground Broadcast Treatment**

Apply this product and the labeled tank mixtures in 10 or more gallons of solution per acre using broadcast boom equipment. Do not apply during periods of gusty winds, when winds are in excess of 15 miles per hour or when other conditions favoring drift exist.

## **9.0 APPLICATION TIMING AND METHODS**

### **9.1 Postemergence Surface Application**

Application must be made postemergence to the crop but prior to weed seedling emergence or in a tank mixture that controls emerged weeds. WARRANT Herbicide will not control emerged weeds so it must be applied to a weed-free soil surface or in a tank-mixture with products that provide postemergence control of weeds at the time of application. Read and follow all restrictions and directions on tank-mix product labels. Precipitation or overhead sprinkler irrigation is required after application to move the herbicide treatment into the weed germination zone to control unemerged weeds. The amount of precipitation or irrigation required depends on existing soil moisture, soil type and percent organic matter content, but 1/2 to 3/4 inch is normally adequate. If weeds emerge after treatment, rotary hoe or shallowly cultivate to improve performance.

**NOTE:** DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

### **9.2 Preplant Incorporated, Preemergence surface in Sorghum only**

Application of this product can be made prior to emergence of a sorghum crop planted with seeds that have been properly treated with seed protectant or safener and prior to weed seedling emergence or in a tank mixture that controls emerged weeds. WARRANT Herbicide will not control emerged weeds so it must be applied to a weed-free soil surface or in a tank-mixture with products that provide postemergence control of weeds at the time of application. Read and follow all restrictions and directions on tank-mix product labels. Precipitation or overhead sprinkler irrigation is required after application to move the herbicide treatment into the weed germination zone to control unemerged weeds. The amount of precipitation or irrigation required depends on existing soil moisture, soil type and percent organic matter content, but 1/2 to 3/4 inch is normally adequate. If weeds emerge after treatment, rotary hoe or shallowly cultivate to improve performance.

### **9.3 Cultivation Information**

Delay cultivation after application for as long as possible unless weeds or grasses emerge. Shallowly cultivate or rotary hoe immediately if weeds or grasses emerge. If cultivation is

necessary because of soil crusting or compaction, set equipment shallow and minimize lateral soil movement to avoid dilution or displacement of the herbicide treatment.

#### **10.0 WEEDS CONTROLLED**

When applied as directed under conditions described, this product and tank mixtures of this product will control or reduce competition from the weeds listed.

**NOTE:** C = Control R = Reduced Competition



## 10.1 Annual Grasses

<b>Barnyardgrass</b>	
<i>Echinochloa crus-galli</i>	C
<b>Crabgrass</b>	
<i>Digitaria ischaemum</i>	C
<b>Crowfootgrass</b>	
<i>Dactyloctenium</i>	C
<i>aegyptium (L.) Willd.</i>	
<b>Cupgrass,</b>	C
<b>prairie</b> <i>Eriochloa contracta Hitchc</i>	
<b>Foxtail:</b>	C
<b>giant</b> <i>Setaria faberi</i>	
<b>green robust purple, robust</b>	
<b>white</b> <i>Setaria viridis</i>	
<b>yellow</b> <i>Setaria lutescens</i>	
<b>Goosegrass</b>	
<i>Eleusine indica</i>	C
<b>Johnsongrass, seedling</b>	
<i>Sorghum halepense</i>	R
<b>Millet: foxtail</b> <i>Setaria italica</i>	R
<b>Oat, wild</b>	
<i>Avena fatua</i>	R
<b>Panicum:</b>	C
<b>browntop,</b> <i>Panicum fasciculatum</i>	
<b>fall,</b> <i>Panicum dichotomiflorum</i>	
<b>Panicum, Texas</b>	
<i>Panicum texanum</i>	R
<b>Rice, red</b>	
<i>Oryza sativa</i>	C
<b>Sandbur; Grassbur</b>	
<i>Cenchrus incertus</i>	R
<b>Shattercane; Wild cane</b>	
<i>Sorghum bicolor</i>	R
<b>Signalgrass, broadleaf</b>	
<i>Brachiaria platyphylla</i>	C
<b>Sprangletop, red</b>	
<i>Leptochloa filiformis</i>	C
<b>Wheat, volunteer</b>	
<i>Triticum aestivum</i>	R
<b>Witchgrass</b>	
<i>Panicum capillare L.</i>	C

**10.2 Annual Broadleaves**

<b>Beggarweed, Florida</b>	
<i>Desmodium tortuosum</i>	R
<b>Carpetweed</b>	
<i>Mollugo verticillata</i>	C
<b>Galinsoga</b>	
<i>Galinsoga spp.</i>	C
<b>Groundcherry, cutleaf</b>	
<i>Physalis angulata</i>	R
<b>Henbit</b>	
<i>Lamium amplexicaule</i>	C
<b>Lambsquarters</b>	
<i>Chenopodium album</i>	C
<b>Nightshade, black, <i>Solanum nigrum</i></b>	C
<b>hairy, <i>Solanum sarrachoides</i></b>	
<b>Pigweed: Carelessweed</b>	
<i>Amaranthus spp.</i>	C
<b>Purslane</b>	
<i>Portulaca oleracea</i>	C
<b>Pusley, Florida</b>	
<i>Richardia scabra</i>	C
<b>Sida, prickly;</b>	
<b>Teaweed</b>	
<i>Sida spinosa</i>	R
<b>Smartweed</b>	
<i>Polygonum pensylvanicum</i>	R
<b>Starbur, bristly</b>	
<i>Acanthospermum hispidum</i>	R
<b>Waterhemp</b>	
<i>Amaranthus tuberculatus</i>	C

**11.0 FIELD CORN****11.1 WARRANT Herbicide**

This product, when applied postemergence in field corn and production seed corn, as one or two applications, will provide preemergence control or reduced competition of the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. If weeds are emerged at time of application, apply a labeled postemergence herbicide with this product to control the emerged

weeds. Observe the directions for use, precautions and restrictions on the label of the postemergence herbicide.

**Approved Application System**

Ground: Broadcast boom

**Approved Application Method**

**Postemergence Surface**

Apply this product prior to weed emergence in emerged corn. The product can be applied from seedling emergence until the corn reaches 30 inches in height. Directed spray may be used to minimize interference of spray by crop and to increase soil coverage. Drop nozzles will provide optimum spray coverage and weed control when corn height is 24 to 30 inches. Use rates are defined in the table below. Use the higher rate on larger weeds and where heavy weed infestations exist. Weeds emerged at the time of application are not controlled by this product. If weeds are emerged at application, apply a labeled postemergence herbicide with this product to control the emerged weeds or shallowly cultivate or rotary hoe to improve performance.

Apply WARRANT broadcast over-the-top or directed to the soil surface, according to the rate table listed below. Application before weeds emerge or after clean cultivation is necessary as this product will not control emerged weeds.

DO NOT use WARRANT Herbicide on sweet corn.

DO NOT exceed 4 quarts per acre per season when making a second application.

DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

DO NOT graze treated area or feed treated forage to livestock for 40 days following application of this product.

**Application Rates**

SOIL TEXTURAL GROUP	BROADCAST RATE PER ACRE*					
	Less than 3% Organic Matter (quarts)			3% or More Organic Matter (quarts)		
Coarse	1.5	to	2.0	2.0		
Medium	1.5	to	2.75	2.0	to	2.75
Fine	1.5	to	2.75	2.75	to	3.0

\* Use the higher rate in the range for areas of heavy weed infestation.

**11.2 WARRANT Herbicide plus Roundup Agricultural Herbicides on Corn Hybrids with Roundup Ready 2 Technology**

This program may be used postemergence, from seedling emergence until the corn reaches 30 inches in height, in tank mixture with Roundup agricultural herbicides on corn hybrids with Roundup Ready 2 Technology. Corn hybrids with Roundup Ready 2 Technology include Roundup Ready Corn 2 and seed

products displaying the Roundup Ready 2 Technology logo. Refer to Roundup agricultural herbicide labels for specific weeds controlled postemergence.

**Approved Application System**

Ground: Broadcast boom

**Approved Application Method**

**Postemergence Surface**

This tank mix may be applied from seedling emergence until the corn reaches 30 inches in height. Directed spray may be used to minimize interference of spray by crop and to increase soil coverage. Drop nozzles are recommended for optimum spray coverage and weed control when corn height is 24 to 30 inches. Labeled use rates for this tank mix are defined in the table below. Use the higher rate on larger weeds and where heavy weed infestations exist. This tank mix should be applied when weeds are 2 to 4 inches in height and before the weed height and/or density become competitive with the crop.

For difficult to control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane, broadleaf signalgrass and Pennsylvania smartweed use the higher rates of Roundup agricultural herbicides.

DO NOT use WARRANT Herbicide on sweet corn.

DO NOT exceed 4 quarts per acre per season of WARRANT Herbicide when making a second application.

DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

DO NOT graze treated area or feed treated forage to livestock for 40 days following application of this product.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANCE GENE.

**Application Rates (minimum and maximum range)**

SOIL TEXTURAL GROUP	BROADCAST RATE PER ACRE*	
	WARRANT HERBICIDE (quarts)	ROUNDUP AGRICULTURAL HERBICIDES
Coarse	1.5 to 2.0	Per Labeled Rate
Medium	1.5 to 2.75	Per Labeled Rate
Fine	1.5 to 3.0	Per Labeled Rate

\* Use the higher rate in the range for areas of heavy weed infestation.

**11.3 WARRANT Herbicide Tank-Mixtures for Field Corn**

This product may be tank-mixed with the following products. Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to corn. Read and follow label directions of all products in the tank mixture. The most restrictive label directions apply.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredient(s) that, at the time of printing, are registered for use post-emergence to corn:

2,4-D, atrazine, carfentrazone-ethyl, clopyralid, dicamba, diflufenzopyr, flumetsulam, flumiclorac pentyl ester, glyphosate, isoxaflutole, linuron, mesotrione, metribuzin, pendimethalin, rimsulfuron

Aim, Aim EC, Axiom, Balance, Banvel, Callisto, Clarity, Define, Distinct, Epic, Hornet, Linex, Lorox, Marksman, Prowl, Python, Python II, Resource, Shark]

**12.0 Forage or Grain Sorghum (Milo)**

**12.1 WARRANT Herbicide**

This product, when applied preplant incorporated, preemergence, or postemergence in sorghum, as one or two applications, will provide preemergence control or reduced competition of the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of the label. If weeds are emerged at time of application, apply a labeled postemergence herbicide with this product to control the emerged weeds. Observe the directions for use, precautions and restrictions on the label of the postemergence herbicide.

Preplant Incorporated and Preemergence applications of this product must be made ONLY to sorghum planted with seed that has been properly treated with seed protectant or safener. Rates from the table below should be based on the soil texture and the tolerance of the sorghum hybrid.

NOTE: In Texas, use only in the Panhandle area and the fine-textured soils of the Gulf Coast and the Blacklands. In the Texas Panhandle and Oklahoma Panhandle, do not apply preplant incorporated.

**Approved Application Systems**

Ground: Broadcast boom

**Approved Application Methods**

**Preplant Incorporated; Preemergence Surface; Postemergence Surface**

Apply this product preplant incorporated, preemergence, or postemergence to sorghum before the crop exceeds 11 inches in height (in general, 5 to 6 leaf sorghum). This product will not control emerged weeds, therefore, emerged weeds must be controlled by a labeled postemergence herbicide or cultural means.

If sorghum seed is not properly treated with seed protectant or safener, preplant and preemergence applications of Warrant will severely injure the crop.

DO NOT exceed 4 quarts per acre per season when making a second application.

DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

DO NOT graze treated area or feed treated forage to livestock for 60 days following application of this product.

**Application Rates**

	<b>Broadcast Rate Per Acre</b>
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SOIL TEXTURAL GROUP	WARRANT *	WARRANT *
	(quarts) Less than 1.5% organic matter	(quarts) 1.5% or more organic matter
Coarse	1.5 to 2.25	2.0 to 2.5
Medium	1.5 to 2.25	2.0 to 3.0
Fine	1.5 to 2.5	2.25 to 3.0

\* Use the higher rate in the range for areas of heavy weed infestation.

### 13.0 Soybeans

#### 13.1 WARRANT Herbicide

Apply this product postemergence to soybeans and preemergence to weeds at 1.25 to 2 qts/A according to the rate charts below. One or two applications will provide preemergence control or reduced competition of the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. If weeds are emerged at time of application, apply a labeled postemergence herbicide with this product to control the emerged weeds. Observe the directions for use, precautions and restrictions on the label of the postemergence herbicide.

#### Approved Application System

Ground: Broadcast boom

#### Approved Application Method

#### Postemergence Surface

Apply this product postemergence to soybeans and prior to weed emergence. The application should be made after soybeans are completely emerged but before soybeans reach growth stage R2. Apply this product when crop is small or direct spray to the soil surface to minimize interference of spray by crop. The optimum timing and rate of application is when soybeans are V2-V3 at 1.5 qts/A. Directed applications may be used to increase soil coverage and canopy penetration after soybean growth stage V5. Use rates are defined in the table below. Use the higher rate where heavy weed infestations exist. Weeds emerged at the time of application are not controlled by this product. If weeds are emerged at application, apply a labeled postemergence herbicide with this product to control the emerged weeds or shallowly cultivate or rotary hoe to improve performance.

Apply WARRANT broadcast over-the-top or directed to the soil surface, according to the rate table listed below. Application before weeds emerge or after clean cultivation is necessary as this product will not control emerged weeds.

DO NOT exceed 4 quarts per acre per season when making a second application.

DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

DO NOT graze treated area or feed treated forage to livestock following application of this product.

#### Application Rates

SOIL TEXTURAL GROUP	BROADCAST RATE PER ACRE*					
	Less than 1.5% Organic Matter (quarts)			1.5% or More Organic Matter (quarts)		
Coarse	1.25	To	1.6	1.25		1.7
Medium	1.25	To	1.7	1.25	to	1.9
Fine	1.25	To	1.9	1.25	to	2.0

\* Use the higher rate in the range for areas of heavy weed infestation.

**13.2 WARRANT Herbicide plus Roundup Agricultural Herbicides on Roundup Ready Soybeans and Roundup Ready 2 Yield Soybeans**

This program may be used postemergence in tank mixture with Roundup agricultural herbicides on Roundup Ready Soybeans and Roundup Ready 2 Yield Soybeans when soybeans are completely emerged until the soybeans reach growth stage R2. Refer to Roundup agricultural herbicide labels for specific weeds controlled postemergence.

**Approved Application System**

Ground: Broadcast boom

**Approved Application Method**

**Postemergence Surface**

This tank mix may be applied after soybeans are completely emerged and until the soybeans reach growth stage R2. The optimum timing and rate of application is when soybeans are V2-V3 at 1.5 qts/A. Directed applications may be used to increase soil coverage and canopy penetration after soybean growth stage V5. Labeled use rates for this tank mix are defined in the table below. Use the higher rate on larger weeds and where heavy weed infestations exist. This tank mix should be applied when weeds are 2 to 4 inches in height and before the weed height and/or density become competitive with the crop.

For difficult to control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane, broadleaf signalgrass and Pennsylvania smartweed use the higher rates of Roundup agricultural herbicides.

DO NOT exceed 4 quarts per acre per season of WARRANT Herbicide when making a second application.

DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

DO NOT graze treated area or feed treated forage to livestock following application of this product.

**AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANCE GENE.**

**Application Rates (minimum and maximum range)**

BROADCAST RATE PER ACRE*	
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SOIL TEXTURAL GROUP	WARRANT HERBICIDE (quarts)	ROUNDUP AGRICULTURAL HERBICIDES
Coarse	1.25 to 1.7	Per Labeled Rate
Medium	1.25 to 1.9	Per Labeled Rate
Fine	1.25 to 2.0	Per Labeled Rate

\* Use the higher rate in the range for areas of heavy weed infestation.

**13.3 WARRANT Herbicide Tank-Mixtures for Soybeans**

This product may be tank-mixed with the following products. Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to soybeans. Read and follow label directions of all products in the tank mixture. The most restrictive label directions apply.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredient(s) that, at the time of printing, are registered for use post-emergence to soybeans:

acifluorfen, bentazon, chlorimuron ethyl, clethodim, cloransulam-methyl, fenoxaprop-P-ethyl, fluazifop-P, fomesafen, imazamox, imazethapyr, lactofen, quizalofop-P-ethyl, sethoxydim, thifensulfuron-methyl.

Arrow, Assure II, Basagran, Classic, Cobra, Extreme, FirstRate, Flexstar, Fusilade DX, Fusion, Harmony GT XP, Poast, Poast Plus, Pursuit, Pursuit Plus, Raptor, Reflex, Select, Select MAX, Synchrony STS, Targa, Ultra Blazer]

**14.0 COTTON**

**14.1 WARRANT Herbicide**

Apply this product postemergence to cotton and preemergence to weeds at 1.25 to 2 qts/A according to the rate charts below. One or two applications will provide preemergence control or reduced competition of the annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. If weeds are emerged at time of application, apply a labeled postemergence herbicide with this product to control the emerged weeds. Observe the directions for use, precautions and restrictions on the label of the postemergence herbicide.

**Approved Application System**

Ground: Broadcast boom

**Approved Application Method**

**Postemergence Surface**

Apply this product postemergence to cotton and prior to weed emergence. The application should be made after cotton is completely emerged but before cotton reaches first bloom. Apply this product when crop is small or direct spray to the soil surface to minimize interference of spray by crop. The optimum timing and rate of application is when cotton is in 2 to 3 leaf stage or prior to weed emergence at 1.5 qts/A. Directed applications may be used to increase soil coverage and canopy penetration after cotton



reaches 5 to 6 leaf stage. Use rates are defined in the table below. Use the higher rate where heavy weed infestations exist. Weeds emerged at the time of application are not controlled by this product. If weeds are emerged at application, apply a labeled postemergence herbicide with this product to control the emerged weeds or shallowly cultivate or rotary hoe to improve performance.

Apply WARRANT broadcast over-the-top or directed to the soil surface, according to the rate table listed below. Application before weeds emerge or after clean cultivation is necessary as this product will not control emerged weeds.

In sprinkler-irrigated areas, sprinkler irrigate after application with 1/2-3/4 inch of water (1/2 inch on coarse-textured soils to 3/4 inch on fine-textured soils) to incorporate product. In furrow-irrigated areas, apply product, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In nonirrigated areas, if at least 1/2 inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides shallow incorporation of the product.

DO NOT exceed 4 quarts per acre per season when making a second application.

DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

DO NOT graze treated area or feed treated forage to livestock following application of this product.

**Application Rates**

SOIL TEXTURAL GROUP	BROADCAST RATE PER ACRE*					
	Less than 1.5% Organic Matter (quarts)			1.5% or More Organic Matter (quarts)		
Coarse	1.25	To	1.6	1.25	To	1.7
Medium	1.25	To	1.7	1.25	To	1.9
Fine	1.25	To	1.9	1.25	To	2.0

\* Use the higher rate in the range for areas of heavy weed infestation.

**14.2 WARRANT Herbicide plus Roundup Agricultural Herbicides on Roundup Ready Cotton**

This program may be used postemergence over the top in tank mixture with Roundup agricultural herbicides on Roundup Ready Cotton when cotton is completely emerged until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). This program may also be used postemergence directed through first bloom when applied with a precision post-directed or hooded sprayer. Refer to Roundup agricultural herbicide labels for specific weeds controlled postemergence. **Over-the-top applications of this tank mix to Roundup Ready Cotton made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.**

**Approved Application System**

Ground: Broadcast boom

**Approved Application Method**

**Postemergence Surface**

This tank mix may be applied after Roundup Ready Cotton is completely emerged until the 4-leaf (node) stage of development. The optimum timing and rate of application is when cotton is in 2 to 3 leaf stage at 1.5 qts/A. If this tank mix is used after the 4-leaf (node) stage, it must be applied with a precision post-directed or hooded sprayer. Contact of the spray with the cotton leaves should be avoided to the maximum extent possible. Labeled use rates for this tank mix are defined in the table below. Use the higher rate on larger weeds and where heavy weed infestations exist. This tank mix should be applied when weeds are 2 to 4 inches in height and before the weed height and/or density become competitive with the crop.

For difficult to control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane, broadleaf signalgrass and Pennsylvania smartweed use the higher rates of Roundup agricultural herbicides.

DO NOT exceed 4 quarts per acre per season of WARRANT Herbicide when making a second application.

DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

DO NOT graze treated area or feed treated forage to livestock following application of this product.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANCE GENE.

#### Application Rates (minimum and maximum range)

SOIL TEXTURAL GROUP	BROADCAST RATE PER ACRE*	
	WARRANT HERBICIDE (quarts)	ROUNDUP AGRICULTURAL HERBICIDES
Coarse	1.25 to 1.7	Per Labeled Rate
Medium	1.25 to 1.9	Per Labeled Rate
Fine	1.25 to 2.0	Per Labeled Rate

\* Use the higher rate in the range for areas of heavy weed infestation.

#### 14.3 WARRANT Herbicide plus Roundup Agricultural Herbicides on Roundup Ready Flex Cotton

This program may be used postemergence in tank mixture with Roundup agricultural herbicides on Roundup Ready Flex Cotton when cotton is completely emerged until cotton reaches first bloom. Refer to Roundup agricultural herbicide labels for specific weeds controlled postemergence.

#### Approved Application System

Ground: Broadcast boom

#### Approved Application Method

#### Postemergence Surface

This tank mix may be applied after cotton is completely emerged and until cotton reaches first bloom. The optimum timing and rate of application is when cotton is in 2 to 3 leaf stage at 1.5 qts/A. Directed applications may be used to increase soil coverage and canopy penetration after cotton reaches 5 to 6

leaf stage. Labeled use rates for this tank mix are defined in the table below. Use the higher rate on larger weeds and where heavy weed infestations exist. This tank mix should be applied when weeds are 2 to 4 inches in height and before the weed height and/or density become competitive with the crop.

For difficult to control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane, broadleaf signalgrass and Pennsylvania smartweed use the higher rates of Roundup agricultural herbicides.

DO NOT exceed 4 quarts per acre per season of WARRANT Herbicide when making a second application.

DO NOT make postemergence surface applications using sprayable fluid fertilizer as the carrier because severe crop injury may occur.

DO NOT graze treated area or feed treated forage to livestock following application of this product.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANCE GENE.

#### Application Rates (minimum and maximum range)

SOIL TEXTURAL GROUP	BROADCAST RATE PER ACRE*	
	WARRANT HERBICIDE (quarts)	ROUNDUP AGRICULTURAL HERBICIDES
Coarse	1.25 to 1.7	Per Labeled Rate
Medium	1.25 to 1.9	Per Labeled Rate
Fine	1.25 to 2.0	Per Labeled Rate

\* Use the higher rate in the range for areas of heavy weed infestation.

#### 14.4 WARRANT Herbicide Tank-Mixtures for Postemergence Over-The-Top Use in Cotton

This product may be tank-mixed with the following products. Ensure that the specific product being used in the tank mixture is registered for application postemergence over-the-top to cotton. Read and follow label directions of all products in the tank mixture. The most restrictive label directions apply.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredient(s) that, at the time of printing, are registered for use post-emergence to cotton:

clethodim, fenoxaprop-P-ethyl, fluazifop-P, pyriithiobac sodium, quizalofop-P-ethyl, sethoxydim

Assure II, Envoke, Fusilade, Ignite, Poast Plus, Pyrimax, Select MAX, Staple]

#### 14.5 WARRANT Herbicide Tank-Mixtures for Post-Directed Use in Cotton

This product may be tank-mixed with the following products. Ensure that the specific product being used in the tank mixture is registered for application postemergence over-the-top to cotton. Read and follow label directions of all products in the tank mixture. The most restrictive label directions apply.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredient(s) that, at the time of printing, are registered for use post-directed to cotton:

carfentrazone-ethyl, diuron, flumioxazin, pendimethalin, quizalofop-P-ethyl, prometryn, pyriithiobac sodium, trifloxysulfuron-sodium

Aim, Caparol, Chateau, Direx, Envoke, Layby-Pro, pendimethalin, Staple, Valor]

**15.0 LIMIT OF WARRANTY AND LIABILITY**

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

To the extent consistent with applicable law, buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company to the extent consistent with applicable law, including, but not limited to, incompatibility with products other than those set forth in the Directions, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

29 of 36

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All other trademarks are the property of their respective owners.

EPA Reg. No. 524-591

In case of an emergency involving this product,  
Call Collect, day or night, (314) 694-4000.

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800 N. LINDBERGH BLVD.  
ST. LOUIS, MISSOURI 63167 USA

# SUPPLEMENTAL LABELING

## MON 63410™ Herbicide

### Alternate Brand Name: WARRANT™ Herbicide

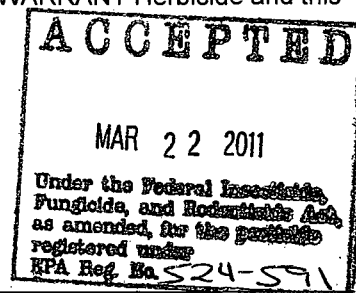
READ THE ENTIRE LABEL FOR WARRANT™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

"Label" as used in this supplemental labeling refers to the label booklet for WARRANT Herbicide and this supplement.

**WARRANT™**  
Herbicide by Monsanto

EPA Reg. No. 524-591

SHAKE WELL BEFORE USING



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### AERIAL APPLICATIONS

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Keep Out of Reach of Children.

## CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This label must be in the possession of the user at the time of herbicide application.

This supplemental label expires on March 22, 2014, and must not be used or distributed after this date.

See the "Product Information" and "Mixing, Spraying and Handling Instructions" sections of the label booklet for WARRANT Herbicide for essential product performance information.

This product may be applied with the following application equipment:

**Aerial Application Equipment: Fixed-wing and helicopter.**

All treatments described on the label booklet for WARRANT Herbicide may be made using aerial application equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label and in separate supplemental labeling published for this product.

DO NOT APPLY THIS PRODUCT USING AERIAL APPLICATION EQUIPMENT EXCEPT UNDER CONDITIONS SPECIFIED ON THIS LABEL.

Apply this herbicide at the appropriate rate as directed on this label in 3 to 15 gallons of water per acre unless otherwise directed on this label or in separate supplemental labeling or Fact Sheets published for this product. Unless otherwise specified, do not exceed 2 quarts of this product per acre when using aerial application equipment. Refer to the individual use area sections of this label for application rates, spray volumes and additional use instructions.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

**AERIAL SPRAY DRIFT MANAGEMENT**

The following drift management requirements must be followed to avoid off-target drift movement from aerial application to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

**Importance of Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions (see the "Wind", "Temperature and Humidity" and "Temperature Inversions" sections of this label).

**Controlling Droplet Size**

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressure listed for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the air stream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length could further reduce drift without reducing swath width.
- **Application height:** Application must be made at a height of 10 feet or less above the top of the largest plants unless a greater height is required for aircraft safety. Making the application at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

### Swath Adjustment

When an application is made with a crosswind present, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase the swath adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

### Wind

Drift potential is lowest between wind speeds of 2 to 10 miles per hour. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Avoid application when wind speeds are below 2 miles per hour due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

### Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### Temperature Inversions

Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### Sensitive Areas

Apply this product only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).



Avoid direct application to any body of water.

**Aircraft Maintenance**

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES COULD RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) that meets aerospace specification MIL-C-38413 can help prevent corrosion.

Read the "Limit of Warranty and Liability" in the label booklet for WARRANT herbicide before using. These terms apply to this supplemental label and if these terms are not acceptable, return the product unopened at once.

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St. Louis, MO 63167 USA

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# SUPPLEMENTAL LABELING

## MON 63410™ Herbicide

### Alternate Brand Name: WARRANT™ Herbicide

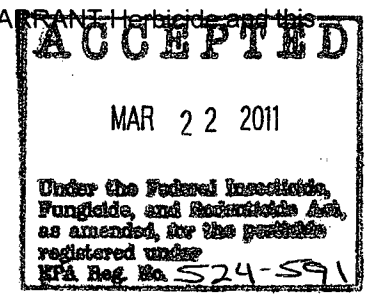
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### CENTER PIVOT APPLICATIONS

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Keep Out of Reach of Children.

## CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This label must be in the possession of the user at the time of herbicide application.

This supplemental label expires on March 22, 2014, and must not be used or distributed after this date.

See the "Product Information" and "Mixing, Spraying and Handling Instructions" sections of the label booklet for WARRANT Herbicide for essential product performance information.

#### CENTER PIVOT APPLICATIONS

All treatments described on the label booklet for WARRANT Herbicide may be made using center pivot irrigation equipment where appropriate, provided that the applicator complies with \_\_\_\_\_

the precautions and restrictions specified on this label and in separate supplemental labeling published for this product.

This product alone or in tank mixture with other herbicides on this label, which are registered for center pivot application, may be applied using center pivot irrigation systems. Do not apply this product through any other type of irrigation system.

Ensure that the soil type and depth to ground water comply with the following restriction. On the following soil types, do not apply this product within 50 feet of any well where the depth to ground water is 30 feet or less: sands with less than 3 percent organic matter; loamy sands with less than 2 percent organic matter; or sandy loams with less than 1 percent organic matter.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. Use only in systems that apply uniformly.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not chemigate through systems connected to a public water system.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Do not apply when system connections or fittings leak, when nozzles do not provide uniform distribution or when the line containing the product must be dismantled and drained.

The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a systems interlock. Pumps, injection equipment, agitation equipment, hoses and connections between supply tank and the point of injection must be constructed of materials which are resistant to this product.

Meter this product or a labeled tank-mixture of this product into the center pivot irrigation system after planting and before crop emergence. Herbicide application should be made in 1/2 to 3/4 inch of water per acre. Do not apply in more than 3/4 inch of water per acre under any

conditions or reduced performance may occur. On very sandy soils (more than 60 percent sand and less than 1 percent organic matter), use a maximum of 1/2 inch water per acre. Good agitation must be maintained during the entire application period. Flush the system with water when application is complete. Refer to the "PRODUCT INFORMATION" section of the label for mixing procedures.

**NOTE:** Applications can be made by injection through center pivot irrigation equipment only when specified for the crop to be treated in the "DIRECTIONS FOR USE" section of this label. Do not apply this product or any labeled tank-mixture through center pivot irrigation unless the treatment is specifically recommended in this label for the crop to be treated.

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